

REMARKS

Claims 1 - 2 and 5 - 6 are pending in this application and claims 1-2 and 5-6 have been amended in order to more particularly point out, and distinctly claim the subject matter to which the Applicants regard as their invention. It is believed that this Amendment is fully responsive to the Office Action dated **April 2, 2003**.

Claim Rejections - 35 USC §112

Claims 1-2, 3/1, 3/2, 5-6, 7/5 and 7/6 are rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, the Examiner asserts that it is unclear how the light intensity for different types of shellfish is changed depending on the type of shellfish being detected. The Examiner's grounds of rejection is respectfully traversed. The equipment utilized to detect different types of shellfish is set initially for one wavelength when detecting shrimp and another wavelength when detecting crab.

Claims 1-2 and 5-6 are rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically the Examiner asserts that broad language in a claim followed by narrow language does not clearly set the metes and bounds of the claim. The Examiner's grounds of

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rejection is respectfully traversed. The claims do not use exemplary language. The phrase "such as" does not exist in the claims. The phrase "irradiating light of specific wave-range" is utilized in the claims. Therefore, strictly narrow language is utilized in the claims.

However, in order to more specifically recite the claim limitations, independent claims 1, 2, 5 and 6 have been amended to recite "irradiating light at a peak wavelength." Via this amendment, both the Examiner's assertion regarding two types of shellfish and that the claim language has both broad and narrow limitations are overcome.

Therefore, withdrawal of the rejection of Claims 1-2 and 5-6 under 35 USC §112, second paragraph, is respectfully requested.

Claim Rejections - 35 USC § 103

Claims 1 and 5 are rejected under 35 USC §103(a) as being unpatentable over JP Patent No. 1-202241 to Hayata et al.

Hayata et al. describes a system and method of identifying pieces of shell from shucked shellfish utilizing x-ray imaging. X-rays from an x-ray radiator (32) are shown upon shucked shellfish (14) and the light from a fluorescent plate (36) is converted into an electrical signal. The electrical signal is then measured for intensity and absorption of specific wavelengths. Utilizing this irradiation of the shellfish, it is possible to identify pieces of shell attached to the shellfish.

The present invention is a method and device for identifying pieces of shell attached to stripped shellfish. The present invention has discovered that irradiating shellfish with light of at

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a peak wavelength of about 254 nm clearly illuminates the shell attached to the shellfish, as specified on page 9, line 14 of the specification.

The Examiner asserts that Hayata et al. uses an x-ray device that normally utilizes a wavelength of less than 352 nm. The Examiner's grounds of rejection is respectfully traversed. Nothing in Hayata et al. describes utilizing a specific wavelength.

Therefore, claims 1 and 5 patentably distinguish over the prior art relied upon by reciting, as exemplified by claim 1,

“A method of detecting and removing unstripped residual shell left on shellfish, comprising: irradiating light at a peak wavelength of 254 nm onto stripped shellfish after finishing a shell-stripping work on the shellfish, determining if there is residual shell on the stripped shellfish and subsequently removing any residual shell.” (Emphasis Added)

Therefore, withdrawal of the rejection of Claims 1 and 5 under 35 USC §103(a) as being unpatentable over JP Patent No. 1-202241 to Hayata et al. is respectfully requested.

Claims 1 and 5 are rejected under 35 USC §103(a) as being unpatentable over Hayata et al in view of U.S. Patent No. 5,902,177 to Tessier et al.

Tessier et al. describes a device and method for removing ribs from a pork flank. This device and method entails measuring the thickness of the ribs utilizing reflected light. Through experimentation, it has been discovered that optimum excitation is provided by a wavelength of 335 nm plus or minus 20 nm and maximum contrast is obtained at 410 nm.

The Examiner asserts that the method described by Tessier et al. would work equally as well for Hayata et al. The Examiner's motivation to combine Hayata et al. and Tessier et al. is respectfully traversed since Hayata et al. deals with shellfish and Tessier et al. deals with pork

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flanks. Therefore, there is no motivation to combine the teachings of Tessier et al. into Hayata et al. and no reasonable expectation of success.

Therefore, claims 1 and 5 patentably distinguish over the prior art relied upon by reciting, as exemplified by claim 1,

“A method of detecting and removing unstripped residual shell left on shellfish, comprising: irradiating light at a peak wavelength of 254 nm onto stripped shellfish after finishing a shell-stripping work on the shellfish, determining if there is residual shell on the stripped shellfish and subsequently removing any residual shell.” (Emphasis Added)

Therefore, withdrawal of the rejection of Claims 1 and 5 under 35 USC §103(a) as being unpatentable over Hayata et al in view of U.S. Patent No. 5,902,177 to Tessier et al. is respectfully requested.

Claims 2 and 6 are rejected under 35 USC §103(a) as being unpatentable over Hayata et al. in view of Tessier et al.

Claims 2 and 6 patentably distinguish over the prior art relied upon by reciting, as exemplified by claim 2,

“A method of detecting and removing unstripped residual shell left on shellfish, comprising: irradiating light at a peak wavelength of 254 nm onto stripped shellfish after finishing the shell stripping work on the shellfish, taking an image of the stripped shellfish with a CCD camera, and on the basis of information on the intensity of fluorescent light emitted from the fetched image of shellfish, determining if there is residual shell on the stripped shellfish and subsequently removing any residual shell.” (Emphasis Added)

Therefore, withdrawal of the rejection of Claims 2 and 6 under 35 USC §103(a) as being unpatentable over Hayata et al. in view of Tessier et al. is respectfully requested.

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Claims 3/1, 3/2, 7/5 and 7/6 are rejected under 35 USC §103(a) as being unpatentable over Hayata et al. or Hayata et al. in view of Tessier et al.

The Examiner admits on page 11 of the office action that the wavelength of 314 nm utilized by Tessier et al. is not the same as 254 nm recited in claims 3 and 7 and newly amended claims 1, 2 5 and 6. However, the Examiner asserts that 254 nm and 314 nm are close to each other. The Examiner's assertions is respectfully traversed. A peak wavelength of 254 nm is not the same as a wavelength of 314 nm. Further, Tessier et al. indicates a peak wavelength of 410 nm provides the best contrast. Therefore, a peak wavelength of 254 nm is a substantially different from 314 nm.

Claims 3 and 7 have been cancelled. Therefore, withdrawal of the rejection of Claims 3/1, 3/2, 7/5 and 7/6 under 35 USC §103(a) as being unpatentable over Hayata et al. or Hayata et al. in view of Tessier et al. is respectfully requested.

Conclusion

In view of the aforementioned amendments and accompanying remarks, claims, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

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In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, WESTERMAN & HATTORI, LLP



George N. Stevens
Attorney for Applicant
Reg. No. 36,938

GNS/anp
Atty. Docket No. **020287**
Suite 1000
1725 K Street, N.W.
Washington, D.C. 20006
(202) 659-2930



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